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**Amanat et al.**

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(54) **METHOD AND APPARATUS FOR  
AUTOMATED CANCELLATION OF ORDERS  
FOR SECURITIES**

(76) **Inventors:** **Irfan Amanat**, 200 E. 94<sup>th</sup> St., Apt.  
1712, New York, NY (US) 10128;  
**Michael Bundy**, 22422 Cove Hollow,  
Katy, TX (US) 77450

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U.S.C. 154(b) by 267 days.

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(51) **Int. Cl.<sup>7</sup>** ..... **G06F 17/30; G06F 17/60**

(52) **U.S. Cl.** ..... **707/3; 705/37; 705/36**

(58) **Field of Search** ..... **707/3, 7, 9, 10;**  
**705/36, 37, 30**

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**Primary Examiner**—Sanjiv Shah

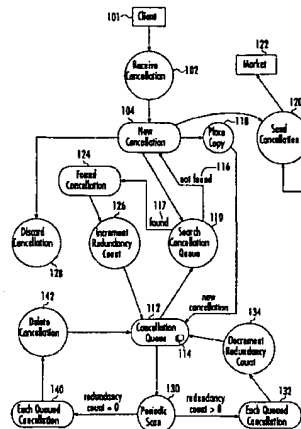
(74) **Attorney, Agent, or Firm**—Gordon T. Arnold; Arnold  
& Associates

(57)

## ABSTRACT

Methods and systems for administering redundant cancellations of orders for securities. Canceling orders for securities in an automated securities trading broker-dealer system. Receiving new cancellations from clients and searching a cancellation queue for cancellations corresponding to the new cancellations. If a corresponding cancellation is found in the cancellation queue, the redundancy count of the corresponding cancellation is incremented in the cancellation queue and the new cancellation is discarded. If a cancellation corresponding to the new cancellation is not found in the cancellation queue, a copy of the new cancellation is placed in the cancellation queue and the new cancellation is sent to the market. Embodiments periodically scanning the cancellation queue for cancellations having a redundancy count greater than zero, decrementing the redundancy count for such cancellations. Some embodiments issue additional cancellations dependent upon receipt of acknowledgments of earlier cancellations. Other embodiments issue additional cancellations dependent upon receipt of rejections of earlier cancellations. Other embodiments provide the capability of canceling orders for securities when an order corresponding to a cancellation is still in a market queue waiting to be sent to a market. Other embodiments include implementing Immediate or Cancel orders (IOC) for markets that do not support IOC orders.

**82 Claims, 20 Drawing Sheets**



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TITLE: Method and apparatus for automated cancellation of  
orders for securities

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Detailed Description Text - DETX (20):

In a further embodiment of the present invention, shown in FIG. 1, the entire cancellation queue (112) is periodically scanned (130) every three seconds for queued cancellations (114) having a redundancy count greater than zero. In this kind of embodiment, for each queued cancellation having a redundancy count greater than zero (132), the redundancy count of the queued cancellation is decremented (134) every three seconds. In other embodiments, the cancellation queue (112) is **scanned for intervals** other than three seconds. All **scanning intervals** are within the scope of this invention.

Detailed Description Text - DETX (25):

According to a further embodiment, shown in FIG. 3, the cancellation queue (112) is periodically scanned (322) every three seconds for queued cancellations (114) having a redundancy count greater than zero. In this embodiment, the redundancy count of each queued cancellation having a redundancy count greater than zero (324) is decremented every three seconds. In other embodiments, the cancellation queue (112) is **scanned at intervals** other than three seconds. All **scanning intervals** are within the scope of this invention.

Detailed Description Text - DETX (46):

According to an even more specific embodiment, the processor (802) is programmed to scan (818) the cancellation queue (112) every three seconds for queued cancellation having a redundancy count greater than zero. In this kind of embodiment, processor (802) is further programmed to decrement (815) the redundancy count of each queued cancellation having a redundancy count greater than zero. In alternative embodiments, the processor (802) is programmed to

scan the cancellation queue (112) in time intervals other than three seconds. All **scanning intervals** are within the scope of this invention.

Detailed Description Text - DETX (64):

According to an even more specific embodiment, the processor (802) is programmed to scan (1010) the cancellation queue (112) every three seconds for queued cancellations (114) having a redundancy count greater than zero. In this kind of embodiment the processor is further programmed to decrement (1022) the redundancy count for each queued cancellation (114) having a redundancy count greater than zero. In alternative embodiments, the processor (802) is programmed to scan (1010) the cancellation queue (112) at time intervals other than three seconds. All **scanning intervals** are within the scope of this invention.

Current US Original Classification - CCOR (1):

**707/3**